

PATENT  
Docket No. 49933US032

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): HOOPMAN et al. )  
Serial No.: 09/955,604 )  
Confirmation No.: 1214 )  
Filed: 19 September 2001 )  
For: TOOLS TO MANUFACTURE ABRASIVE ARTICLES )

Group Art Unit: 1722  
Examiner: J. Leyson

10/30/03  
**RECEIVED**  
DEC 31 2002  
**TC 1700**

APPELLANTS' BRIEF ON APPEAL

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

This Brief is presented in support of the Appeal filed on October 22, 2002, from the final rejection of claims 23, 24, 30-32, 89, 90, 92, 93, and 133-148 of the above-identified application under 35 U.S.C. § 102 (23, 30, 31, 89, 92 and 133-148) and 35 U.S.C. § 103 (claims 23, 24, 31, 32, 89, 90, 92, 93 and 133-148), as set forth in the Final Office Action mailed July 22, 2002 and maintained in the Advisory Action mailed October 4, 2002.

This Brief is being submitted in triplicate, as set forth in 37 C.F.R. § 1.192(a).

Applicants hereby authorize a charge to Deposit Account No. 13-4894 in the amount of \$320.00 for filing this Brief under 37 C.F.R. § 1.17(f).

I. REAL PARTY IN INTEREST

The real party in interest of the above-identified patent application is the assignee,

**APPELANTS' BRIEF ON APPEAL**

Serial No.: 09/955,604

Confirmation No.: 1214

Filed: 19 September 2002

For: TOOLS TO MANUFACTURE ABRASIVE ARTICLES

Page 2 of 14

**RECEIVED**  
DEC 31 2002  
TC 1700

3M Innovative Properties Company..

**II. RELATED APPEALS AND INTERFERENCES**

There are no appeals or interferences known to Appellants' Representatives which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

**III. STATUS OF CLAIMS**

The claims in the present application are claims 23, 24, 30-32, 89, 90, 92, 93, and 133-148. The amendments made in the Amendment and Response filed September 23, 2002 (Appendix VI) will be entered herewith as indicated by the Examiner's Advisory Action (Appendix VII). Therefore, claims 23, 24, 30-32, 89, 90, 92, 93, 134-136, 138-143, and 145-148 (Appendix I), reflect the pending claims from the Amendment and Response filed September 23, 2002 (Appendix VI), which are the subject of this Appeal.

**IV. STATUS OF AMENDMENTS**

This application is a continuation of Serial No. 09/520,032, filed 6 March 2000, which is a divisional application of Serial No. 09/259,488, filed February 26, 1999, issued as U.S. Patent 6,076,248 on June 20, 2000, which is a divisional application of Serial No. 08/940,267, filed September 29, 1997, issued as 6,129,540 on October 10, 2000, which is a

**APPELANTS' BRIEF ON APPEAL**

Serial No.: 09/955,604

Confirmation No.: 1214

Filed: 19 September 2002

For: TOOLS TO MANUFACTURE ABRASIVE ARTICLES

Page 3 of 14

continuation application of Serial No. 08/450,814, filed May 25, 1995, now abandoned, which is a divisional application of Serial No. 08/120,300, filed September 13, 1993, now abandoned.

A Communication (dated September 19, 2001, a copy enclosed, see Appendix II) was filed concurrently with the Request for Filing a Continuation Application Under Rule §1.53(b). A first Office Action (a copy enclosed, see Appendix III) was mailed January 30, 2002, in which claims 56, 57, 63, 64, 113, 114, and 149-153 were withdrawn from consideration in response to a Restriction Requirement by the Examiner. Claims 133, 137, and 144 were objected to under 37 U.S.C. § 1.75, claims 23, 30, 31, 89, 92, and 133-148 were rejected under 35 U.S.C. § 102(b), claims 23, 24, 31, 32, 89, 90, 92, 93, and 133-148 were rejected under 35 U.S.C. § 103(a), and claims 23, 24, 30-32, 89, 90, 92, 93, and 133-148 were provisionally rejected under an obviousness-type double patenting rejection.

An Amendment and Response (dated April 30, 2002, a copy enclosed, see Appendix IV) was filed in which claims 23, 24, 30-32, 56, 57, 63, 64, 92, 93, 113, 114, 136, 143, and 151-153 were amended to recite a production tool comprising a plurality of cavities, " . . . wherein each of the cavities has a single opening".

A final Office Action (a copy enclosed, see Appendix V) was mailed July 22, 2002, in which the 35 U.S.C. §§ 102, 103 and provisional obviousness-type double patenting rejections and the objection to claims 133, 137, and 144 were maintained as described in the first nonfinal Office Action mailed on January 30, 2001.

**APPELANTS' BRIEF ON APPEAL**

Serial No.: 09/955,604

Confirmation No.: 1214

Filed: 19 September 2002

For: TOOLS TO MANUFACTURE ABRASIVE ARTICLES

Page 4 of 14

An Amendment and Response (dated September 23, 2002, a copy enclosed, see Appendix VI) cancelled claims 56, 57, 63, 64, 113, 114, 133, 137, 144, and 149-153. An Advisory Action (a copy enclosed, see Appendix VII) was mailed on October 4, 2002, in which the Examiner (1) maintained the rejections from the final Office Action (Appendix V); (2) indicated that all rejections to claims 133, 137, and 144 had been overcome; and (3) indicated that the proposed amendments in the Amendment and Response (Appendix VI) would be entered for purposes of Appeal. The pending claims (upon entry of the Amendment and Response dated September 23, 2002 (Appendix VI)) are claims 23, 24, 30-32, 89, 90, 92, 93, 134-136, 138-143, and 145-148.

All amendments were entered.

**V. SUMMARY OF THE INVENTION**

Appellants' invention is directed to a production tool for manufacturing an abrasive article. The production tool includes a plurality of cavities, each of which has a single opening. Various embodiments of the production tool are claimed.

Support for the pending claims can be found throughout the specification, including the originally filed claims and drawings, as would be clearly understood by one of skill in the art. Examples of locations of support for the pending claims are listed in the table below.

Claim 23	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 20, line 27
----------	---

**APPELANTS' BRIEF ON APPEAL**

Page 5 of 14

Serial No.: 09/955,604

Confirmation No.: 1214

Filed: 19 September 2002

For: TOOLS TO MANUFACTURE ABRASIVE ARTICLES

	through page 21, line 2; at page 26, line 16 through page 27, line 7; and in Figures 6 and 7 as originally filed.
Claim 24	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 20, line 27 through page 21, line 2; at page 26, line 16 through page 27, line 7; and in Figures 6 and 7 as originally filed.
Claim 30	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 26, line 16 through page 27, line 7; and in Figures 6 and 7 as originally filed.
Claim 31	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 26, line 16 through page 27, line 7; and in Figures 6 and 7 as originally filed.
Claim 32	Support can be found, e.g., at page 6, lines 18-25; at page 7, lines 6-15; at page 26, line 16 through page 27, line 7; in originally filed claim 1; and in Figures 6 and 7 as originally filed.
Claim 89, 92	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; at page 10, lines 23-27; and in Figures 6 and 7 as originally filed.
Claim 90, 93	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; at page 10, lines 23-27; and in Figures 6 and 7 as originally filed.
Claim 134	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; at page 10, lines 23-27; and at page 22, lines 14-16.
Claim 135	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16

**APPELANTS' BRIEF ON APPEAL**

Page 6 of 14

Serial No.: 09/955,604

Confirmation No.: 1214

Filed: 19 September 2002

For: TOOLS TO MANUFACTURE ABRASIVE ARTICLES

	through page 27, line 7; at page 10, lines 23-27; and at page 22, lines 14-16.
Claim 136	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; at page 10, lines 23-27; at page 22, lines 14-16; and in Figures 6 and 7 as originally filed.
Claim 138	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; at page 10, lines 23-27; and at page 22, lines 14-16.
Claim 139	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; at page 10, lines 23-27; and at page 22, lines 14-16.
Claim 140	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 141	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 142	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 143	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; at page 10, lines 23-27; and in Figures 6 and 7 as originally filed.
Claim 145	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page

**APPELANTS' BRIEF ON APPEAL**

Page 7 of 14

Serial No.: 09/955,604

Confirmation No.: 1214

Filed: 19 September 2002

For: TOOLS TO MANUFACTURE ABRASIVE ARTICLES

	10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; at page 10, lines 23-27; and at page 22, lines 14-16.
Claim 146	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; at page 10, lines 23-27; and at page 22, lines 14-16.
Claim 147	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.
Claim 148	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 10, line 23 through page 11, line 2; at page 19, lines 14-20; at page 26, line 16 through page 27, line 7; and at page 10, lines 23-27.

**VI. ISSUE(S) PRESENTED FOR REVIEW**

1. Whether claims 23, 30, 31, 89, 92, 134-136, 138-143, and 145-148 are anticipated under 35 U.S.C. § 102(b) by U.S. Patent No. 3,312,583 (Rochlis '583, Appendix VIII).

2. Whether claim 23, 24, 31, 32, 89, 90, 92, 93, 134-136, 138-143, and 145-148 are obvious under 35 U.S.C. § 103(a) over U.S. Patent No. 3,312,583 (Rochlis '583).

**VII. GROUPING OF CLAIMS**

For the purpose of this appeal, claims 23, 24, 30-32, 89, 90, 92, 93, 134-136, 138-143, and 145-148 stand or fall together.

## **VIII. ARGUMENT**

### **A. Claims 23, 30, 31, 89, 92, 134-136, 138-143, and 145-148 are not anticipated under 35 U.S.C. § 102(b) by Rochlis '583.**

The standard for anticipation is one of strict identity. "It is axiomatic that for prior art to anticipate under § 102 it has to meet every element of the claimed invention . . . ."

Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 231 U.S.P.Q. 81, 90 (Fed. Cir. 1986), cert. denied, 480 U.S. 947 (1987).

"In determining that quantum of prior art disclosure which is necessary to declare an applicant's invention 'not novel' or 'anticipated' within section 102, the stated test is whether a reference contains an 'enabling disclosure' . . . ." In re Hoeksema, 399 F.2d 269, 158 U.S.P.Q. 596, 600 (CCPA 1968). "A reference contains an 'enabling disclosure' if the public was in possession of the claimed invention before the date of invention." M.P.E.P. § 2121.01.

#### **1. Rochlis '583 does not disclose every element of the claimed invention.**

Each of Appellants' independent claims recites a production tool for manufacturing an abrasive article having a plurality of cavities, each of which has a single opening. In contrast, the mold disclosed in Rochlis '583 requires a laminate construction with multiple openings (i.e., openings between the layers in addition to the opening through which mold material enters the cavity) (col. 3, lines 40-49). Specifically, these openings between the



mating surfaces of the laminations allow that "air or gas evolved in the molding or hardening procedure may escape" (col. 13, lines 70-73). There is no disclosure in Rochlis '583, however, that any cavity, let alone each of the cavities, has only a single opening. That is, there is no disclosure that Rochlis '583 has laminated mold constructions without openings between the mating surfaces of the laminations. Furthermore, there is no disclosure that Rochlis '583 has mold constructions with a single opening.

In the Advisory Action (Appendix VII), the Examiner alleged that Appellants do not preclude multiple openings in the instant claims. This is respectfully traversed. Appellants' claims recite that each cavity has a single opening. According to the Random House College Dictionary, "single" is defined as "one only; only one in number" (Appendix IX).

Appellants also traverse the assertion that the vent openings are not part of the mold cavities. Rochlis '583 clearly states that the vent openings are provided to prevent entrapment of gas "in the mold cavity in a manner to possibly alter the shape or size of the pile elements" (column 3, lines 47-48). In other words, the vent openings allow gas to escape from the cavities to allow them to fill properly. As a result, any assertion that the vent openings are not located in the cavities is simply not supported by Rochlis '583 and must be withdrawn.

**2. Rochlis '583 does not contain an enabling disclosure.**

As stated above, Rochlis '583 does not disclose a production tool with any cavity,

let alone each of a plurality of cavities, having only a single opening. Furthermore, Rochlis '583 does not teach how one of skill in the art would make a production tool for manufacturing an abrasive article with even one cavity having a single opening. Rochlis '583 is enabling for a laminated mold construction that includes openings between the mating surfaces of the laminations. There is no enabling disclosure in Rochlis '583 of how one of skill in the art would make a mold or production tool with only a single opening.

Although in the Advisory Action (Appendix VII), the Examiner alleges that Rochlis '583 does not disclose that such openings between the mating surfaces are not critical for the operation of the apparatus, Appellants submit that Rochlis '583 does not teach anything other than a laminate construction with such multiple openings.

**B. Claims 23, 24, 31, 32, 89, 90, 92, 93, 134-136, 138-143, and 145-148 are not obvious under 35 U.S.C. § 103 over Rochlis '583.**

"When applying 35 U.S.C. § 103, the following tenets of patent law must be adhered to:

- (A) The claimed invention must be considered as a whole;
  - (B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;
  - (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and
  - (D) Reasonable expectation of success is the standard with which obviousness is determined." M.P.E.P. § 2141 (citations omitted).
-

---

**1. Rochlis '583 does not teach or suggest the claimed invention.**

Rochlis '583 does not explicitly teach or suggest a production tool with any cavity having only a single opening, let alone each of a plurality of cavities having only a single opening. Furthermore, Rochlis '583 does not explicitly teach or suggest how one of skill in the art would make a production tool for manufacturing an abrasive article with a cavity having a single opening in each cavity. Rochlis '583 teaches how to make a laminated mold construction with openings between the mating surfaces of the laminations. From the disclosure of Rochlis '583, one of skill in the art would not know how to make a mold with only a single opening in each cavity.

**2. When considered as a whole, Rochlis '583 teaches away from the claimed invention.**

"It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art." In re Wesslau, 353 F.2d 238, 147 U.S.P.Q. 391, 393 (CCPA 1965). A single statement in the prior art reference should not be taken out of context and relied upon with the benefit of hindsight to show obviousness; rather, a reference should be considered as a whole. Bausch & Lomb, Inc. v. Barnes-Hind/Hycrocurve, Inc., 796 F.2d 443, 230 U.S.P.Q. 416, 419-

**APPELLANTS' BRIEF ON APPEAL**

Serial No.: 09/955,604

Confirmation No.: 1214

Filed: 19 September 2002

For: TOOLS TO MANUFACTURE ABRASIVE ARTICLES

Page 12 of 14

420 (Fed. Cir. 1986), cert. denied, 484 U.S. 823 (1987), on remand, 10 U.S.P.Q. 2d 1929 (N.D. Calif. 1989).

One of skill in the art would not be motivated to make a mold or production tool for manufacturing an abrasive article with a single opening as a result of the teachings of Rochlis '583. In fact, one of skill in the art would expect that a mold with only a single opening in each cavity would not be functional since the openings between the mating surfaces of the laminations allow that "air or gas evolved in the molding or hardening procedure may escape" (col. 13, lines 70-73). In effect, Rochlis '583 teaches away from Appellants' invention when its disclosure is considered as a whole.

**3. It is impermissible to use hindsight as an obviousness test.**

Appellants respectfully submit that the use of Rochlis '583 alone in an obviousness rejection can only occur by the impermissible use of hindsight reasoning. In order to establish a *prima facie* case of obviousness, the references must teach or suggest all the claim limitations. Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 231 U.S.P.Q. 81 at 93 ("Focusing on the obviousness of substitutions and differences instead of on the invention as a whole, . . . was a legally improper way to simplify the difficult determination of obviousness."). One cannot "simply [to] engage in a hindsight reconstruction of the claimed invention, using the Applicant's structure as a template and selecting elements from references to fill the gaps." In re

**APPELLANTS' BRIEF ON APPEAL**

Serial No.: 09/955,604

Confirmation No.: 1214

Filed: 19 September 2002

For: TOOLS TO MANUFACTURE ABRASIVE ARTICLES

Page 13 of 14

Gorman, 933 F.2d 982, 18 U.S.P.Q.2d 1885, 1888 (Fed. Cir. 1991). Further, both the suggestion for combining the teachings of the prior art to make the invention and the reasonable likelihood of its success must be founded in the prior art and not in the teachings of Appellants' disclosure. In re Dow Chem., 837 F.2d 469, 473, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988). Here, the cited art neither suggests the combination of its teachings nor suggests the reasonable likelihood that such a combination would result in the present invention.

Appellants respectfully submit that the teachings of Rochlis '583 are woefully inadequate to teach or suggest any mold or production tool for manufacturing an abrasive article, wherein the tool has a plurality of cavities, each of which as a single opening. Impermissible hindsight was used to sift through the prior art in order to reconstruct the claimed invention using Appellants' specification as a template for selecting a particular teaching.

Furthermore, there is simply no teaching, suggestion, or incentive in Rochlis '583 to provide a motivation to modify its teachings to provide a mold or tool with cavities having only single openings, specifically in view of the fact that Rochlis '583 emphasizes the importance of the openings between the mating surfaces of the laminations (they allow for air or gas to be evolved in the molding or hardening procedure, col. 13, lines 70-73).

**APPELLANTS' BRIEF ON APPEAL**

Page 14 of 14

Serial No.: 09/955,604

Confirmation No.: 1214

Filed: 19 September 2002

For: TOOLS TO MANUFACTURE ABRASIVE ARTICLES

**C. Summary**

For the many foregoing reasons, it is respectfully submitted that *prima facie* cases of anticipation and obviousness have not been established. It is earnestly requested that the Board reverse the Examiner's rejections, and that all of the claims be allowed. Appellants acknowledge the pending obviousness-type double patent rejection over copending Application No. 09/520,032 and, after patentability of the instant invention is confirmed, a Terminal Disclaimer will be filed if such a rejection is maintained. It is assumed that Appellants would be allowed to file a Terminal Disclaimer if needed.

"EXPRESS MAIL" MAILING LABEL NUMBER EV 183 602 386 US

DATE OF DEPOSIT December 23, 2002  
I HEREBY CERTIFY THAT THIS PAPER OR FEE IS BEING DEPOSITED WITH THE  
UNITED STATES POSTAL SERVICE "EXPRESS MAIL POST OFFICE TO ADDRESSEE"  
SERVICE UNDER 37 CFR 1.10 ON THE DATE INDICATED ABOVE AND IS ADDRESSED TO  
THE ASSISTANT COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231

PRINTED NAME KATHLEEN FRANKLIN

SIGNATURE [Signature]

Dec. 23, 2002  
Date

Respectfully submitted,

HOOPMAN et al.,

By their attorneys,

Mueing, Raasch & Gebhardt, P.A.  
P.O. Box 581415  
Minneapolis, MN 55458-1415  
(612)305-1220

By: [Signature]  
Ann M. Mueing  
Reg. No. 33,977  
Direct Dial: (612) 305-1217